

## SMCG Plastic-Encapsulate Diodes

### ES3A THRU ES3J Super Fast Recovery Rectifier Diodes

#### Features

- $I_{F(AV)}$  3A
- $V_{RRM}$  50V-600V
- High surge current capability
- Polarity: Color band denotes cathode

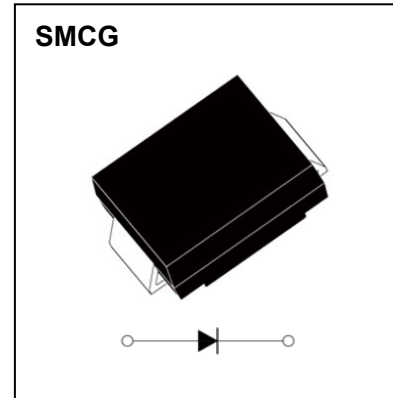
#### Applications

- Rectifier

#### Marking

- ES3X

X : From A To J



#### Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	ES3							
				A	B	C	D	E	G	H	J
Repetitive Peak Reverse Voltage	$V_{RRM}$	V		50	100	150	200	300	400	500	600
Maximum RMS Voltage	$V_{RMS}$	V		35	70	105	140	210	280	350	420
Maximum DC Blocking Voltage	$V_{DC}$	V		50	100	150	200	300	400	500	600
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load, $T_L=100^\circ\text{C}$	3.0							
Surge(Non-repetitive)Forward Current	$I_{FSM}$	A	60Hz Half-sine wave, 1 cycle, $T_a=25^\circ\text{C}$	100							
Operation Junction and Storage Temperature Range	$T_J, T_{STG}$	$^\circ\text{C}$		-55 ~ +150							

#### Electrical Characteristics (T=25°C Unless otherwise specified)

Item	Symbol	Unit	Test Condition	ES3							
				A	B	C	D	E	G	H	J
Peak Forward Voltage	$V_F$	V	$I_F=3.0\text{A}$	0.95			1.25		1.7		
Maximum reverse recovery time	$t_{rr}$	ns	$I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$	35							
Peak Reverse Current	$I_{RRM1}$	$\mu\text{A}$	$V_{RM}=V_{RRM}$	$T_a=25^\circ\text{C}$							
	$I_{RRM2}$			$T_a=100^\circ\text{C}$							
Typical junction capacitance	$C_J$	pF	Measured at 1MHz and applied reverse voltage of 4.0V D.C.	80							
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^\circ\text{C/W}$	Between junction and ambient	47							
	$R_{\theta J-L}$		Between junction and terminal	12							

#### Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.27" x 0.27" (7.0 mm x 7.0 mm) copper pad areas

# Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

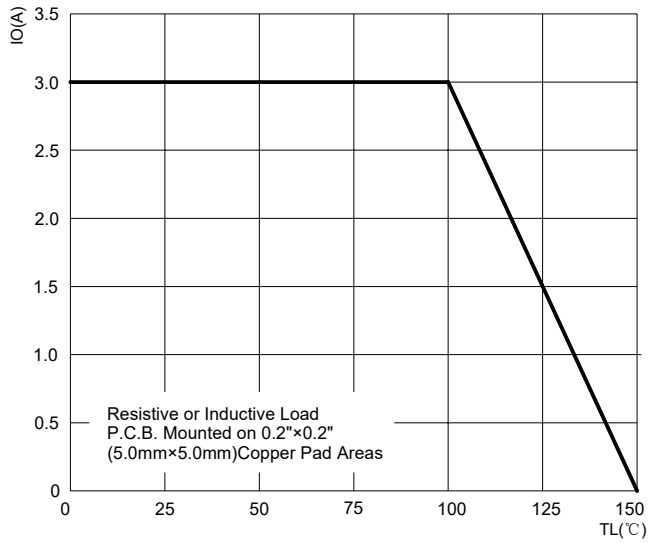


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

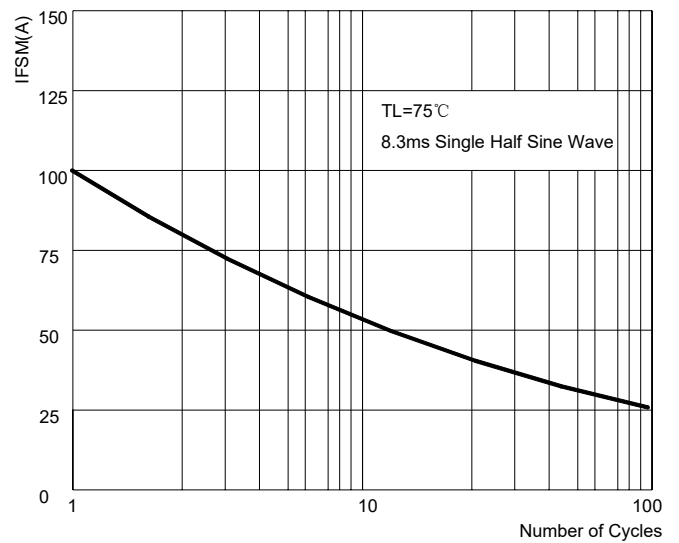


FIG.3: TYPICAL FORWARD CHARACTERISTICS

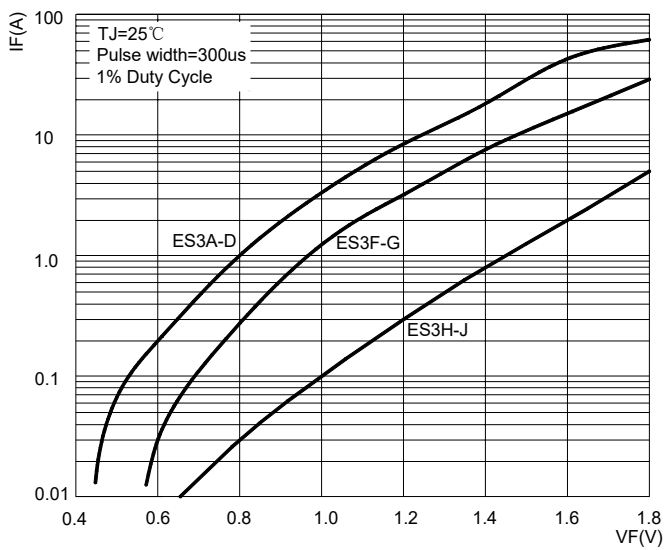


FIG.4: TYPICAL REVERSE CHARACTERISTICS

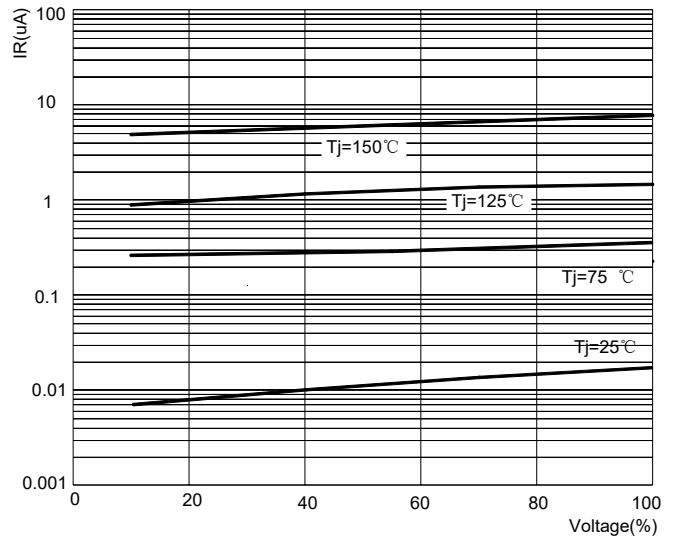
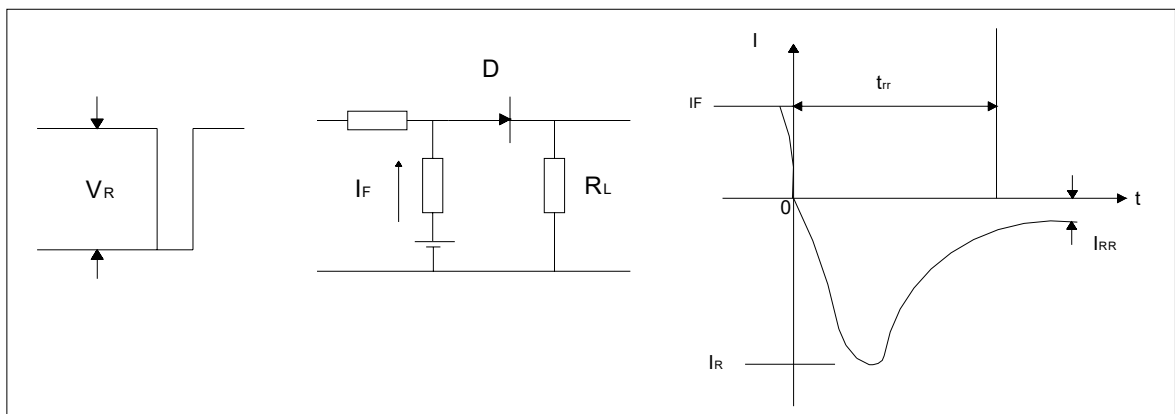
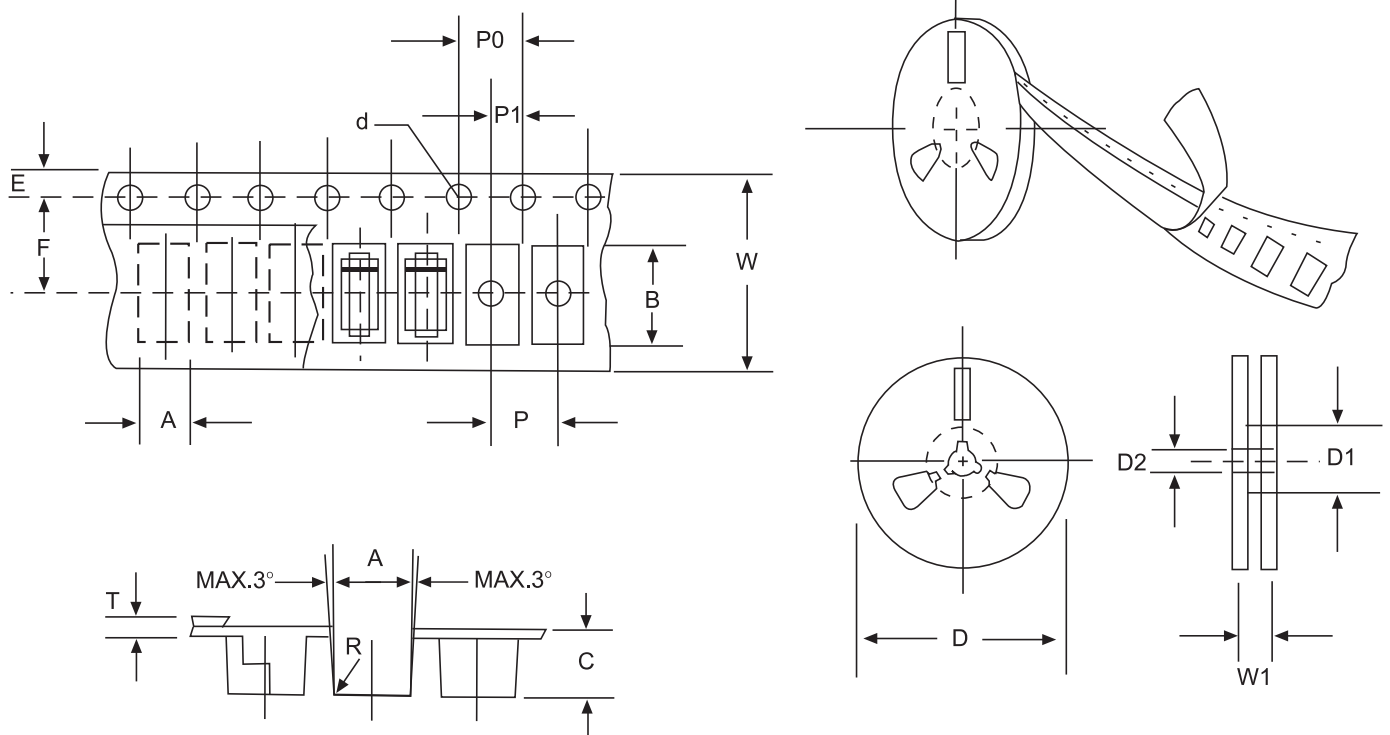


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time





# Reel Taping Specifications For Surface Mount Devices–SMCG



**FIG: CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING**

ITEM	SYMBOL	SMCG mm(inch)
Carrier width	A	6.05±0.1(0.238±0.004)
Carrier length	B	8.31±0.1(0.327±0.004)
Carrier depth	C	2.70±0.1(0.106±0.004)
Sprocket hole	d	1.55±0.05(0.061±0.002)
Reel outside diameter	D	330±2.0(13±0.079)
Reel inner diameter	D1	75 ±1.0 ( 2.95 ±0.039)
Feed hole diameter	D2	13±0.5(0.512±0.020)
Sprocket hole position	E	1.75 ±0.1(0.069±0.004)
Punch hole position	F	7.65±0.05(0.301±0.002)
Punch hole pitch	P	8.0±0.1(0.315±0.004)
Sprocket hole pitch	P0	4.0±0.1(0.157±0.004)
Embossment center	P1	2.0±0.1(0.079±0.004)
Total tape thickness	T	0.3 ± 0.1 ( 0.012±0.004)
Tape width	W	16.0±0.2(0.630±0.008)
Reel width	W1	24.0±2.0(0.945±0.079)

NOTE: Devices are packed in accordance with EIA standard RS-481-A and specification given above.

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Rectifiers](#) category:*

*Click to view products by [Changjing Electronics Technology](#) manufacturer:*

Other Similar products are found below :

[70HFR40](#) [FR105 R0](#) [RL252-TP](#) [150KR30A](#) [1N5397](#) [1N4002G](#) [1N4005-TR](#) [UFS120Je3/TR13](#) [JANS1N6640US](#) [481235F](#)  
[RRE02VS6SGTR](#) [067907F](#) [MS306](#) [70HF40](#) [T110HF60](#) [T85HFL60S02](#) [US2JFL-TP](#) [A1N5404G-G](#) [CRS12\(T5L,TEMQ\)](#) [ACGRB207-HF](#)  
[CLH07\(TE16L,Q\)](#) [CLH03\(TE16L,Q\)](#) [ACGRC307-HF](#) [ACEFC304-HF](#) [NTE6356](#) [NTE6359](#) [85HFR60](#) [40HFR60](#) [70HF120](#) [85HFR80](#)  
[D126A45C](#) [SCF7500](#) [D251N08B](#) [SCHJ22.5K](#) [SM100](#) [SCPA2](#) [SDHD5K](#) [ACGRA4001-HF](#) [D1821SH45T PR](#) [D1251S45T](#) [NTE6358](#)  
[NTE5850](#) [NTE5819](#) [NTE5837](#) [NTE5892](#) [NTE5900](#) [NTE5911](#) [NTE5915](#) [NTE5921](#) [NTE6104](#)